

submitted in lieu of Form 3160-5

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

Sundry Notices and Reports on Wells

1. Type of Well

GAS

2. Name of Operator

MERIDIAN OIL

3. Address & Phone No. of Operator

PO Box 4289, Farmington, NM 87499 (505) 326-9700

4. Location of Well, Footage, Sec., T, R, M

1650'FNL, 1650'FEL, Sec.21, T-31-N, R-9-W, NMPM

5. Lease Number
SF-078386A

6. If Indian, All. or
Tribe Name

7. Unit Agreement Name

8. Well Name & Number
Sunray G #2

9. API Well No.
30-045-10584

10. Field and Pool
Blanco Mesaverde

11. County and State
San Juan Co, NM

12. CHECK APPROPRIATE BOX TO INDICATE NATURE OF NOTICE, REPORT, OTHER DATA

Type of Submission

☒ Notice of Intent
☐ Subsequent Report
☐ Final Abandonment

Type of Action

☐ Abandonment ☐ Change of Plans
☐ Recompletion ☐ New Construction
☐ Plugging Back ☐ Non-Routine Fracturing
☒ Casing Repair ☐ Water Shut off
☐ Altering Casing ☐ Conversion to Injection
☒ Other - Pay add

13. Describe Proposed or Completed Operations

It is intended to add additional pay to the Mesaverde and repair the casing per the attached procedure & wellbore diagram.

RECEIVED
SEP 15 1994
OIL & GAS DIV.
DIST. 3

070 FARMINGTON, NM

94 SEP -2 PM 2:36

RECEIVED
BLM

14. I hereby certify that the foregoing is true and correct.

Signed *Jeffrey Bradner* (JK5) Title Regulatory Affairs Date 8/31/94

(This space for Federal or State Office use)

APPROVED BY _____ Title _____ Date _____

CONDITION OF APPROVAL, if any:

APPROVED

SEP 06 1994

DISTRICT MANAGER

NMOC

Pertinent Data Sheet - Sunray G #2

Location: 1650' FNL, 1650' FEL, Section 21, T31N, R09W, San Juan County, New Mexico

Field: Blanco Mesaverde

Elevation: 6502' GL

TD: 5971'

PBTD: 5956'

Completed: 06-17-55

Sidetrack: 11-27-72

DP #: 49269A

Casing Record:

<u>Hole Size</u>	<u>Csg Size</u>	<u>Wt. & Grade</u>	<u>Depth Set</u>	<u>Cement</u>	<u>Top/Cement</u>
12 1/4"	9 5/8"	25.4# Armco	172'	125 sxs	Surface/Circ
8 3/4"	7"	23.0#/20.0# J-55	5067'	500sxs	TOC @ 2855' TS
6 1/4"	4 1/2"	10.5# J-55	5971'	125 sxs	TOC @ 3650' TS
	Schlumberger Model "R" Packer @		5118'		

Tubing Record:

<u>Tbg Size</u>	<u>Wt. & Grade</u>	<u>Depth Set</u>
2 3/8"	4.7# J-55	5118'

Formation Tops:

Ojo Alamo:	2576'	Cliff House:	5113'
Kirtland:	2670'	Menefee:	5222'
Fruitland:	2950'	Point Lookout:	5572'
Pictured Cliffs:	3357'	Mancos:	5721'
Lewis:	3418'		

Logging Record: GR-CBL-CCL, Density Bond, I.E.S., Temp Survey

Stimulation:

Cliff House

Frac: Sand/Oil - 5067' - 5245', w/14,200 gal oil & 10,000# sand.

Point Lookout

Frac: Sand/Oil - 5468' - 5745', w/10,400 gal oil & 10,000# sand.

Workover History:

11/72: Cmt retainer @ 4986', squeeze w/150 sxs. Perf squeeze holes @ 1608', set retainer @ 1553', squeeze thru perms w/125 sxs. Drilled retainer @ 1553' & cmt to 1608'. Would not hold. Set cmt retainer @ 1557', re-squeeze perms w/125 sxs. Drilled retainer @ 1557' & cmt below perms @ 1608'. Drilled retainer @ 4986' & cmt to 5082'. Sidetrack to TD of 5971', PBTD @ 5956'.

Perf: 5746' - 5754', 5780' - 5788', 5812' - 5820', 5832' - 5840', 5864' - 5872', 5882' - 5890', 5920' - 5928' w/16 SPZ.

Frac: w/48,000# 20/40 sand & 48,000 gal water. Dropped 6 sets of 16 balls. Flush w/4750 gal water. Dropped BB to baffle @ 5722'. Tested OK.

Perf: 5538' - 5548', 5564' - 5572', 5584' - 5600', 5626' - 5642', 5682' - 5690', 5700' - 5708' w/16 SPZ.
Frac: w/52,000# 20/40 sand & 33,340 gal water. Dropped 5 sets of 16 balls. Flush w/3800 gal water. BP @ 5250'.

Perf: 5164' - 5172', 5182' - 5172', 5182' - 5190', 5202' - 5212', 5222' - 5230' w/16 SPZ.

Frac: w/30,000# 20/40 sand & 25,800 gal water. Dropped 3 sets of 16 balls. Flush w/3450 gal water. Drilled BP @ 5250'. Drilled baffle @ 5722'.

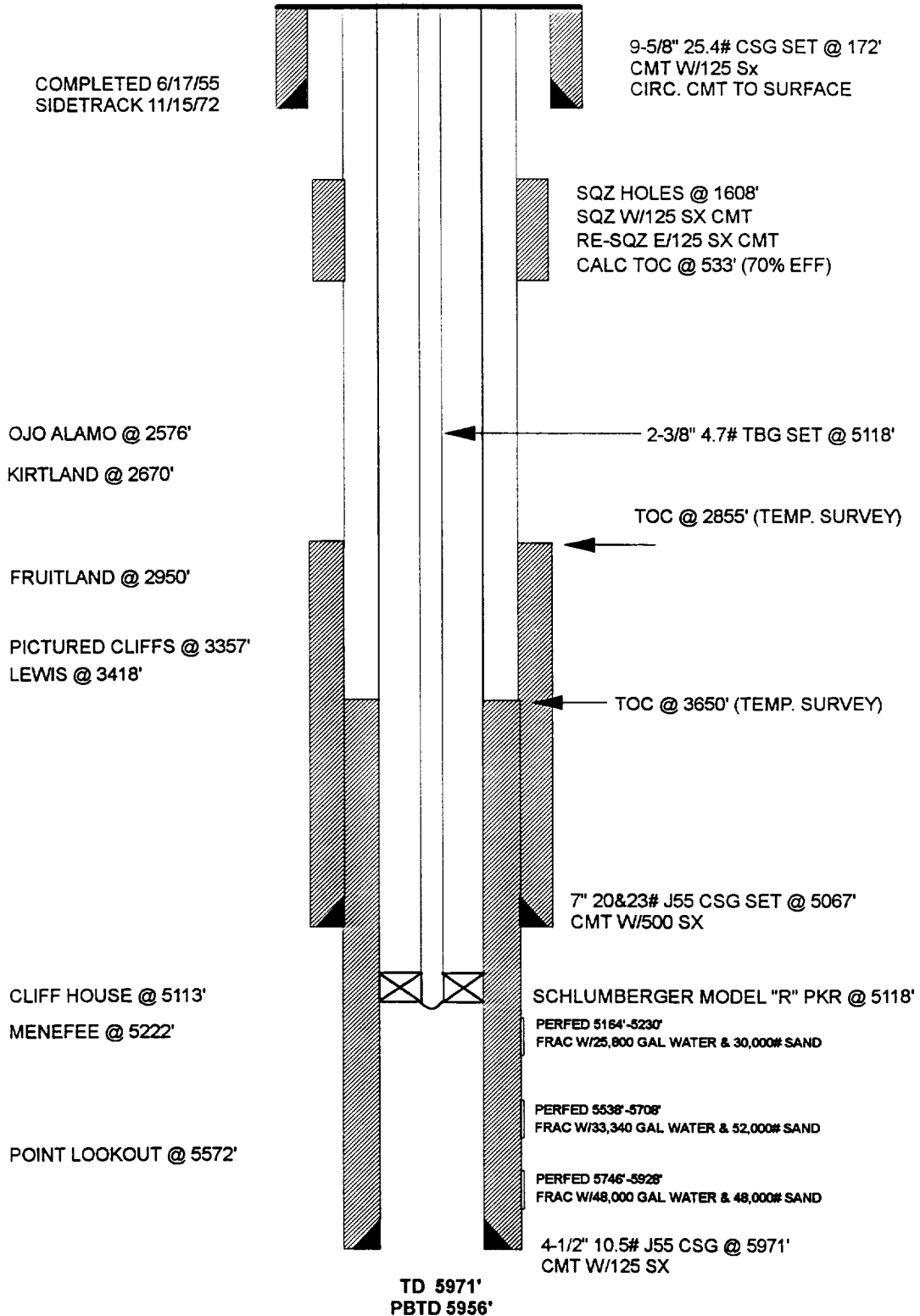
Transporter: EPNG

SUNRAY G #2

AS OF 8/1/94

BLANCO MESAVERDE

UNIT G, SEC 21, T31N, R09W, SAN JUAN COUNTY, NM



Sunray G #2 - Mesaverde
Menefee Payadd / Casing Repair
Lat-Long by GITI: 36.886246 - 107.781647
NE/4 Section 21, T31N-R9W
August 24, 1994

1. Hold safety meeting. MIRU. Install safety equipment and fire extinguishers in strategic locations. Install 6x400 bbl frac tanks and 1x400 bbl rig tank. Fill each frac tank with 5#'s of biocide and a total of 2254 bbls fresh water.
2. ND WH, NU BOP. TOOH with 2-3/8" 4.7# J-55 Mesaverde tubing string and Schlumberger Model "R" packer set @ 5118'. Send packer to yard and replace bad tubing as needed.
3. Pick up 3-7/8" bit and 4-1/2" 10.5# casing scraper and TIH. Make scraper run to COTD of 5956'. TOOH. Lay down casing scraper.
4. RU wireline. Wireline set a 4-1/2" RBP @ 5100'. TIH and load hole with fresh water. Pressure test the casing to 700 psi for 15 minutes. If pressure test fails, locate the failure with a packer and tubing. TOOH. Run CBL-CCL-GR from PBTD to surface. Send copy of CBL to office for analysis. The casing will be repaired either by cement squeeze or "cut and pull". If the 4-1/2" casing is pulled, the 7" casing will also be pressure tested. Contact engineering for procedure.
5. After casing repair is completed and the hole is cleaned up, TIH remove all BP's. RU wireline with full lubricator. Hold safety meeting. Run CCL-GR correlation strip from 5550' to 5200'. Wireline set a RBP @ 5525'. Dump sand on top of RBP with dump bailer. Perforate the following intervals underbalanced at 0.3" diameter holes utilizing 3-1/8" HSC guns: (16 holes total)

5273	5397
5275	5399
5317	5415
5319	5466
5335	5472
5337	5478
5380	5482
5383	5494

Inspect guns to ensure all perforations fired.

6. PU 2-7/8" workstring with turned down collars (or buttress) and SAP tool. Breakdown each perforation with 1 bbl of 15% HCl (with inhibitor) at 1 BPM. TOOH.
7. PU 2-3/8" "frac liner" with at least 90' spacing and TIH. Set the bottom packer @ 5250' then set the top packer (top packer must be set above top perforation @ 5164'). TOOH.
8. TIH with 4-1/2" packer, a SN just above the packer and the workstring. Set the packer just above the top packer on the frac liner. Set a blanking plug in the SN and pressure test the tubing to 5000 psi. Retrieve the blanking plug.
9. RU stimulation company with surface equipment and tubulars rated to at least 6000 psi working pressure. Pressure test all surface lines to 6000 psi. **Maximum allowable treating pressure is 5000 psi.** Stimulate the Menefee per the attached stimulation procedure.
10. SI well for 3 hours after stimulation then flow-back naturally as long as possible. When either flow has ceased or returns have reached a level allowing release of the packer, release the packer and TOOH.

11. TIH with workstring and retrieving head and clean out to top of frac liner with gas. Release liner and TOOH. PU notched collar and TIH with workstring. CO to COTD. PU above the Mesaverde perforations and flow the well naturally, making short trips for clean up when necessary.
12. When returns have diminished (both sand and water), TOOH. PU 4-1/2" packer and TIH. Set packer @ 5250'. Flow test the Menefee for 3 hours. Report the results to engineering before proceeding. SI well for 24 hours. At the end of the SI period, obtain a bottom hole pressure with an Amerada bomb. Flow test well for 3 hours. Release packer and TOOH.
13. PU retrieving head and TIH. Clean out to PBTD. Release RBP @ 5525' and TOOH, laying down the workstring.
14. TIH with one joint of 2-3/8" tubing w expendable check, an F-nipple, then the remaining 2-3/8" tubing. CO to COTD. Land tubing @ 5930' (+/- 30').
15. ND BOP's, NU WH. Obtain final pitot. RDMO. Return well to production.

Approval:

Drilling Superintendent

Vendors:

Stimulation - Dowell Schlumberger (325-5096)
Perforating - Blue Jet (325-5584)

**Stimulation Procedure
Meridian Oil Inc.**

General Information		Well Configuration		Formation and Stimulation Data	
Well Name:	Sunray G #2	Casing:	2-7/8" 6.4# Tubing from 0 - 5250	Max Treating Pressure	5000 psi
Location:	NE/4 Section 21, T31N-R9W	Liner:		Frac Gradient:	0.7 psi/ft
Formation:	Menefee	Capacity:	0.0058 bbl/ft	BH Temp:	150 deg. F
Vendors		PBTD	5525 ft	Vol. to: (gals)	
Stimulation:	Dowell Schlumberger (325-5096)	Top Perf:	5273 ft	PBTD	1,344
Tagging:		Bot Perf:	5494 ft	Top Per:	1,282
		Midpoint:	5384 ft	^ -20' :	1,277
Fluid:	30# Linear Gel	Perforations		Antic. Treating Rate:	25 BPM
Note:		1 spf	0.3 " holes	Antic. BH Treating Pres:	3,768 psi
		16 holes	12.02 " penetration	Antic. Surf Treating Pres:	4,946 psi
				Percent Pad:	10%
				Net Pay:	62 ft
				lb prop/net ft pay:	1,935 lb/ft
				Job Duration:	91.1 min

Stimulation Schedule

Sand Data						Fluid Data				Rate and Time Data			Comments
Tag	Stage	Sand	Conc	Stage	Cum	Stage	Cum	Stage	Cum	Slurry	Stage	Cum	
	Pad	Mesh	ppg	lbs	lbs	Fluid	Fluid	Slurry	Slurry	Rate	Time	Time	
										bpm	min	min	
no	2	20/40	1.0	40,000	30,000	40,000	48,889	41,824	50,713	25.0	39.8	48.3	
no	3	20/40	2.0	80,000	110,000	40,000	88,889	43,648	94,361	25.0	41.6	89.9	
	Flush	N/A	0.0	0	110,000	1,277	90,166	1,277	95,638	25.0	1.2	91.1	
Total					lb/ft	Total	Total	Total		Ave.	Total		
120,000					1,935	90,166	95,638			25.0	91.1		

Volumes and Additives

Water Volume=	90,166	treat +	4,508	excess =	94,675 gallons (MOI)
Water Volume=	2,147	treat +	107	excess =	2,254 bbls (MOI)
Fluid Volume:	2,254 bbl designed treating volume				
20/40 Arizona Sand:	120,000 lbs				
Fluid:	30# Linear Guar Gel designed for 3 hour break @ 145F				
	Filtered 2% KCl water (supplied by MOI)				

Equipment

Tanks:	6	x 400 bbl frac tanks(supplied by MOI).
Filled w/	2,254	useable bbls of filtered 2% KCl water
Mix on the fly equipment.		
Mountain Mover.		
Blender.		
Fluid Pumps as required.		

Radioactive Tagging

None

Comments and Special Instructions

MAXIMUM ALLOWABLE TREATING PRESSURE IS 5000 PSI.

Hold safety meeting with everyone on location before pressure testing surface lines.
Pressure test surface lines to 6000 psi (1000 over max allowable but less than working pressure).
Adjust flush rate and volume according to potential for well to be on vacuum

Production Engineer: Jay Knaebel